



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,675	08/10/2001	Kenichi Negoro	01471/LH	3744

1933 7590 01/02/2004

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC  
767 THIRD AVENUE  
25TH FLOOR  
NEW YORK, NY 10017-2023

EXAMINER

AGUSTIN, PETER VINCENT

ART UNIT	PAPER NUMBER
2652	6

DATE MAILED: 01/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

**Office Action Summary**

Application No.

09/925,675

Applicant(s)

NEGORO ET AL.

Examiner

Peter Vincent M Agustin

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Drawings***

2. Regarding figures 1-5, the examiner suggests replacing "Related Technique" with --Prior Art--.

***Specification***

3. The disclosure is objected to because of the following informalities:
  - a. On page 3, 5<sup>th</sup> & 11<sup>th</sup> lines, the examiner suggests replacing "afore-mentioned" with --aforementioned--.
  - b. On page 3, 12<sup>th</sup> line, the examiner suggests replacing "comprises" with --comprise--.
  - c. On page 3, 15<sup>th</sup> line, the examiner suggests replacing "Drawing" with --Drawings--.
  - d. On page 6, 14<sup>th</sup> line, the examiner suggests replacing "OL." with --OL,--.
  - e. On page 11, 12<sup>th</sup> and 14<sup>th</sup> lines, the examiner suggests replacing "Disk" with --Disc-- to match label on figures.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 rejected under 35 U.S.C. 102(b) as being anticipated by Shindo (US 5,592,460).

Shindo discloses in figure 2 an optical pickup unit (20) for converging a laser beam produced by a semiconductor laser (11) on a signal recording surface (15a) of an optical disc (15) through an objective lens (12) by reflecting said laser beam by a reflecting surface of a rising mirror (14) and for detecting a return beam from said signal recording surface by a photodetector (column 1, lines 23-24) by reflecting said return beam by the reflecting surface of said rising mirror, wherein a rising angle between the reflecting surface of said rising mirror and a pickup's lower surface is smaller than 45 degrees ( $\phi_{1a} = 40$  degrees); and optical parts including said semiconductor laser and said photodetector are arranged in an optical base (lowest horizontal line) with said optical parts inclined (note  $\phi_{3a}$  is inclined with respect to the horizontal) to said optical base so that said optical parts are not jutted out said pickup's lower surface downwards.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

Art Unit: 2652

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 & 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Shikama et al. (hereafter Shikama) (US 4,789,978) in view of Shindo.

Shikama in the astigmatism correction art, discloses in figure 3(a) an optical pickup unit for converging a laser beam (2) produced by a semiconductor laser (40) on a signal recording surface (13) of an optical disc (12) through an objective lens (10) by reflecting said laser beam by a reflecting surface of a rising mirror (9) and for detecting a return beam from said signal recording surface by a photodetector (19) by reflecting said return beam by the reflecting surface of said rising mirror, a diffraction grating (3) for separating said laser beam produced by said semiconductor laser into three laser beams (column 1, lines 31-33; and figure 3(b), elements 14a-14c), a beam splitter (4) for reflecting said three laser beams from said diffraction grating and for transmitting said return beam, a collimator lens (7) disposed between said beam splitter and said rising mirror, and a concave lens (18) disposed between said beam splitter and said photodetector. Shikama does not disclose that a rising angle between the reflecting surface of said rising mirror and a pickup's lower surface is smaller than 45 degrees; and optical parts including said semiconductor laser and said photodetector are arranged in an optical base with said optical parts inclined to said optical base so that said optical parts are not jutted out said pickup's lower surface downwards.

Shindo in the optical recording art, discloses in figure 2 that a rising angle between the reflecting surface of said rising mirror and a pickup's lower surface is smaller than 45 degrees ( $\phi_{1a} = 40$  degrees); and optical parts including said

Art Unit: 2652

semiconductor laser and said photodetector are arranged in an optical base (lowest horizontal line) with said optical parts inclined (note  $\phi_{3a}$  is inclined with respect to the horizontal) to said optical base so that said optical parts are not jutted out said pickup's lower surface downwards. It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to provide the rising mirror and pickup's lower surface of Shikama with a rising angle smaller than 45 degrees and to arrange the optical parts in an inclined manner as suggested by Shindo, the motivation being to provide an optical pickup unit of reduced thickness and size.

8. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Shikama and Shindo as applied to claim 2 above, and further in view of Date et al. (hereafter Date) (US 5,420,848).

Shikama and Shindo disclose all the claimed features as noted in the 103 rejection above, except for the claimed forward sensor for monitoring a light amount of the laser beam which is produced by said semiconductor laser and which is partially transmitted through said beam splitter.

Date in the optical information recording art, discloses in figure 1 a forward sensor (104) for monitoring a light amount (173) of the laser beam (171 & 172) which is produced by said semiconductor laser (101) and which is partially transmitted through said beam splitter (103). It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to add the forward sensor of Date to the optical pickup unit of Shikama and Shindo, in order to control the amount of light emitted by the semiconductor laser based on the amount of light detected by continuous monitoring.

**Conclusion**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ezawa et al. (JP 05120723A) discloses a technique for reducing the thickness of an optical pickup device by setting a mirror at an angle smaller than 45 degrees.

Eguchi et al. (US 5,402,407) discloses a technique for reducing the bulkiness of an optical pickup device by adjusting the optical axis relative to the other components of the optical system.


Kojima et al. (US 5,986,994) discloses a thin and compact pickup unit composed of two light sources with different wavelengths in order to enable recording to disks having different densities.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Agustin whose telephone number is (703) 305-8980. The examiner can normally be reached on Monday thru Friday 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Peter Agustin  
12/17/2003



HOA T. NGUYEN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600  
12/29/03